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TASK SPECIFIC STATEMENT OF WORK

SYSTEMS ENGINEERING/TECHNICAL ASSISTANCE (SE/TA) SUPPORT FOR MISSILE DEFENSE AGENCY TARGETS PROGRAM MISSION ASSURANCE AND INTEGRATION LAUNCH SUPPORT

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Basic TO 00061

1. SCOPE AND OBJECTIVE

1.1 This statement of work (SOW) delineates the tasks required to provide Systems Engineering and Technical Assistance (SE/TA) or Assistance and Advisory Services (A&AS) support to the Rocket Systems Launch Program in its mission to provide target launch vehicle development, target system integration and launch support for the Missile Defense Agency's Targets and Countermeasures program. This SETA support consists of technical program support through planning, studies and analysis, recommendations for problem resolution oversight, data review and associated system engineering support tasks necessary to support the development, modification, integration and launch operations of MDA target vehicles.

1.2 Objective: The objectives of the SETA support contractor are as follows: to provide an independent verification and validation of target system development and production (specifically the launch vehicle and its integration with other target components including RV and countermeasures); to provide expert oversight and evaluation, as required, of component, sub-system, and system-level testing; to provide logistics support and engineering oversight of motor storage, aging surveillance and refurbishment processes; to provide oversight of launch vehicle integration; and to provide oversight during field activities and launch operations for MDA target missions as assigned.

2. GENERAL BACKGROUND

2.1 The MDA Targets program consists of a family of flexible launch systems designed and integrated by the MDA Targets Prime contactor to meet specific user target vehicle requirements. The Prime uses a variety of booster stages (GFE & commercial), guidance systems, reentry vehicles, and countermeasures integrated into target systems and launched from a variety of ranges.

3. CONTRACTOR TASKS

3.1 The individual items in paragraph 3.3, General Work Description, apply to the MDA Targets Program. The basic SOW may cover additional work.

3.2 Additional, Revised, and/or Future Work

3.2.1 This program will use assets from a variety of sources including the RSLP inventory, commercial and excess Navy C-4 motors. Components may also be introduced from other GFP sources and/or from the MDA Prime Contract. This program may change and will be reflected in future contractual documents as required.

3.2.2 Congress, MDA, DOD priorities, or R&D accomplishments direct the nature of the individual programs and projects. Through negotiations, effort can be modified as necessary to reflect new or revised (within scope) R&D projects and objectives.

3.3 General Work Description:

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The contractor shall deliver 75,549 engineering hours during the period of performance (1 January 2005 to 31 December 2005) of this Task Order. A specific category of work by mission for each launch activity is provided in Table A. The contractor shall develop and submit a Project Plan for each launch program and core support within 30 days of notification defining the specific tasks the contractor intends to perform for the specific launch program for Government concurrence. The contractor will populate the proposed effort by annotating Table A to show what efforts will be performed by program. The funded (incremental) programs will be identified in Table B with estimated hours and funding limitations. The contractor will also develop a budget estimate and schedule for each launch program and track and report costs accordingly. The budget estimate may be revised during the course of the program to reflect changes in requirements, priorities, and schedules. The contractor will report these changes when they occur for Government concurrence.

3.3.1 Administrative requirements:

3.3.1.1 Implement the fundamental practices and procedures outlined in Rocket Systems Launch Program Policy 2.0 Independent Analyses Document, dated 29 September 2004.

3.3.1.2 Ensure that the safety designed into systems is not degraded by the repair methods, procedures or changes initiated during work processes associated with this contract.

3.3.2 Other Contractors: Review contractor activities, in-plant practices and procedures plans, specifications, designs, analyses, drawings, test procedures, reports and other program documentation to evaluate compliance with technical guidelines and requirements. Assist in review of contractor technical performance. Assess contractor compliance in terms of deliverables and end items, including Contract Data Requirements List (CDRL) items. Perform independent analyses to verify contractor designs and analyses.

3.3.3 Meeting Support: Participate in a technical supporting role at technical meetings, program status reviews, design reviews, configuration audits, progress report meetings, readiness reviews, pre-ship reviews, and other meetings having significant technical content. Assist in establishing and operating technical working groups and tests. Provide technical support at MDA Target program meetings or briefings with higher headquarters and DOD or outside agencies.

3.3.4 Schedule Analysis: Provide technical advice on the establishment and maintenance of program schedules. Participate in the development, preparation, integration and evaluation of system milestones schedules. Analyze and assess schedule data for conformance with requirements and coordinate the progress, changes, and/or slips with the program office.

3.3.5 Technical Assessments: Perform mission assurance assessments to support programmatic decisions to proceed at required milestones during hardware processing and mission countdown activities and provide/present said analysis at designated design reviews. Support requests for mission feasibility assessments, vehicle

conceptual designs and performance evaluations, facility utilization and modification studies, site selection and launch processing flows.

3.3.6 Engineering Analysis: Perform systems engineering analyses to define mission requirements, support mission planning, and evaluate launch vehicle configurations. Support the integration of technical requirements. Evaluate and analyze the resolution of conflicting technical requirements at the system and subsystem level. Review and evaluate system compatibility of technical changes. Perform engineering support to software system design, development, test, and integration of support equipment.

3.3.7 Configuration Control: Following the completion of a mission preliminary design review, document and track: payload mass, interface control documents for target system component elements (booster, avionics, countermeasures, reentry vehicles, and data and instrumentation) for the purpose of validating component assembly to meet mission design specifications.

3.3.8 Vehicle Integration: Support booster, payload and aircraft, when required, integration activities to ensure compatibility between the payload and launch vehicle including electrical interfaces, electromagnetic interference effects, mechanical/envelope interfaces, support equipment requirements, thermal effects, dynamic loads and structural margins, and payload environments.

3.3.9 Range Safety Support: Perform or review as required, trajectory analyses, guidance and control analyses, mass properties analyses, post-boost performance analyses, aerothermal analyses, and modal analyses to support targeting and controls, as well as structural analyses, break-up analyses and hazards analyses to support Range Safety requirements. Support pre-flight Range Universal Documentation System and safety documentation generation.

3.3.10 Post Flight Analysis: Support post-flight analyses of key performance data and comparisons to pre-flight predictions. Provide an independent evaluation of the overall mission performance and accomplishment of mission objectives.

3.3.11 Anomaly Investigations: Support and assist in mishap and anomaly investigations as necessary in determining causes of malfunctions or unexpected performance derivations. Develop and recommend corrective actions/solution to mitigate recurrence.

3.3.12 New Development: Support the development and production of new or modified launch vehicles, aircraft delivery systems, support equipment, and facilities as required.

3.3.13 Logistics Support: Provide logistics support for Government furnished equipment and assets to be used on MDA/TC targets programs.

3.3.14 Booster Support: Provide program support to booster and launch vehicle processing by performing hardware inspections, data reviews, and nondestructive testing to ensure mission objectives are successfully met. Develop and maintain procedures and processing documentation. Support design and development of support equipment, and assist in associated depot activities. Support field activities as requested.

3.3.14.1 Upon Government approval, procure items not available from Base Supply to support refurbishment activities. Identify future shortfalls of components, subsystems, and support equipment needed to refurbish or use stored ballistic missile assets. Develop preliminary design concepts and assist in the re-procurement.

3.3.15 Interface Control Activities: Perform reviews, studies, and analyses of the interfaces between launch system segments and between major items within each segment to assure that systems integration efforts properly encompass all system elements. Evaluate the soundness of contractor systems integration analyses, plans and activities. Review, analyze and assure thorough definition of the interfaces between equipment and facilities including launch vehicle, delivery system, tracking telemetry and command systems, existing launch base facilities and equipment, and user facilities and equipment.

3.3.16 Environmental Assessment: Support environmental planning, assessments, hazard analyses, and safety plans associated with storage facilities and transportation of program assets.

3.3.17 Program Planning: Support technical, schedule production, and cost requirements for program planning and control. Provide technical, schedule, and cost support in the evaluation of contractor proposals as well as the development and evaluation of technical requirements documents, SOWs, technical briefings, documentation, and visual aids.

3.3.18 Trade Studies: Support financial reviews, cost analyses and trade studies, data base management efforts, and independent cost estimating. Perform surveys, studies and analyses to improve techniques for cost estimation, including nonrecurring, recurring and life cycle costs. Perform analyses of system costs as necessary to evaluate or compare system, segment, subsystem, or programmatic options.

4. CONTRACT DATA REQUIREMENTS LIST (CDRL)

4.1 Report subtitles shall be determined by need. Contractor format is acceptable. Data shall be delivered by paper/electronically as required. Distribution of CDRL item A001 to the government OPR is as follows: one to SMC Det 12/RP, SMC Det 12/RPT and one letter of transmittal to SMC Det 12/PKN. Distribution of CDRL item B00I to the government OPR is as follows: one to SMC Det 12/RPP, SMC Det I2/PKN, and SMC Det I2/FMR.

4.2 Cost data under this TO will be reported for each authorized mission/program in Table B. Costs will be reported by CLIN in conjunction with invoices.

5. ADDITIONAL WORK REQUIREMENTS

5.1 The Basic SOW paragraphs for safety requirements, government furnished property, travel and environmental compliance will apply for this tasking. In addition, travel may be required for this task to include, along with yet unidentified destinations, temporary duty to:

Naval Air Warfare Center - Pt Mugu, CA

Coleman Aerospace Co - Orlando, FL

Yuma Proving Grounds - Yuma, AZ

Ogden Air Logistics Center - Hill AFB, UT

SMC Det 12 - Kirtland AFB, NM

NG - San Bernardino, CA

Army SMDC - Huntsville, AL

MDA - Arlington, V A

Lockheed Martin - Denver CO

Orbital Sciences - Chandler AZ

Kodiak, Alaska

Pacific Missile Range Facility, Hawaii

Reagan Test Site, Kwajalein Atol

Cape Canaveral, Fl

Wallops Island, VA

Wake Island

Other Government facilities, Contractor Facilities and Launch sites as required